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ON

THE USE OF INDIAN HEMP

IN

CHOREA.

BY

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COMMUNICATED TO THE MEDICO-CHIRURGICAL SOCIETY, 4TH FEBRUARY 1869.

EDINBURGH: OLIVER AND BOYD, TWEEDDALE COURT.

MDCCCLXIX.

REPRINTED FROM THE EDINBURGH MEDICAL JOURNAL FOR MARCH 1869.

R36065

THE USE OF INDIAN HEMP IN CHOREA.

THE value of Indian hemp as a therapeutic agent is well established, but a singular difficulty has been experienced in securing for it the confidence to which it is evidently entitled. Without attempting to explain or to excuse this difficulty, I propose to illustrate what appears to me one of its most useful applications.

The negative virtues of the drug are amongst its chief merits. Dr Russell Reynolds, who writes one of the most recent, and one of the best expositions of the value of this remedy, tells us,¹ as the result of a manifestly practical and thoughtful experience, that "it is a soporific, anodyne and antispasmodic; and that it relieves pain and spasm: that it does not leave behind it headache nor vertigo; nor does it impair the appetite nor confine the bowels." These important virtues accord with anything I have seen of its action; nor have I met with any annoyance in practice from its peculiar action on the emotional or intellectual state of the sick. We are apt to be deterred from the use of a remedy by such pictures of its more peculiar actions, as are given of the abuse of the drug "in countries where it is resorted to as a means of intoxication," and of its action in the cases of patients who under its use became "tortured by ocular illusions and spectres of horrible form." I do not doubt that such effects result from the use of the drug; but, in prescribing it, I have not met with them, and I am disposed to think that they are to be avoided even more certainly than we can guard against the unpleasant effects of opium.

As in the case of other useful drugs, the contradictory and extreme views of the efficacy and certainty of its therapeutic action, urged by writers of high authority, have retarded confidence in *cannabis Indica*; and indeed its applications to disease seem scarcely to have been investigated with the reliance which its demonstrated energy would justify. It is now many years since Sir Dominic Corrigan published² a series of cases which underwent cure in the course of four or five weeks, mainly by the use of the *cannabis Indica*, in doses of five minims of the tincture, increased to twenty-five: one of the cases, being of ten

¹ Archives of Medicine. Edited by Lionel S. Beale, M.B. Vol. ii.

² London Medical Times, 1845.

years' standing, was cured in a month. One cannot resist the impression that other elements in the treatment, besides the administration of the cannabis, had need to be taken into account in the explanation of such cures; and moreover, before the actual value of the drug in such cases can be determined, a minute statement of the clinical and pathological relations of each case would be required,—*i.e.*, how far the case might be one of chorea arising in connexion with rheumatism, struma, cerebral or spinal disease, or in connexion with some more temporary source of irritation in the system, as from derangement of the digestive or of the generative or other functions. Again, we find Dr Wilks of Guy's Hospital arguing¹ that, because fifty remedies have been found to cure such a disease as chorea, it may be safely left to itself. Accordingly, Dr Wilks, admitting the usefulness of Dr Hughes's favourite and useful remedy,—rhubarb steeped in port wine,—prescribes to his patients the syrup of orange, that students may witness the spontaneous cure of the disease; and his patients, like Dr Corrigan's, left the hospital cured in about a month.² Nevertheless, whatever preference we may have for a *médecine expectante*, that permits the sick to recover, over the *heroic* measures, whose advocates claim to have *cured* the patients who *escape* out of their hands, thoughtful practitioners will not be prevented from inquiring into the nature and the extent of special therapeutic actions by the scepticism of doubters nor by the rash generalizations of hasty observers.

Jane Williamson, aged 13, was admitted into the Chalmers Hospital under my care on the 15th of October last. She had the look of previously good health, and she was well nourished, but not robust. At the date of her admission, she presented the awkward gesture and the grimace of established chorea, though not severe in its degree. Temperature was natural; pulse 90, rather small; there was slight rheumatic pain of the knees and elbows, and an excited state of the heart's action. The urine was loaded with lithates, it was normal in density, about 30 oz. in twenty-four hours. The bowels were easily regulated.

The treatment, in the first instance, consisted in the administration of a solution of the acetate of potash, with infusion of digitalis, and four minims of Fowler's solution thrice a day.

¹ Medical Times and Gazette, 1862.

² Since this communication was read to the Edinburgh Medico-Chirurgical Society, a clinical lecture on Chorea by Dr Wilks has appeared in the Medical Times and Gazette of the 6th Feb.; but I do not observe that anything in Dr Wilks's recent lecture materially affects what I have remarked on his lecture delivered in 1862. It is satisfactory to observe, however, that Dr Wilks recognises the importance of allaying the morbid condition of the nervous system, and tells us that, while he has met with only temporary advantage from morphia and chloroform, belladonna and conium have been useful; and that, in one case, some benefit was derived from the administration of hemp.

The history of her previous illness given by herself and her friends was that, about a month previously, she was taken with a not intense attack of rheumatic fever. She suffered a good deal from the state of the larger joints; no symptom of cardiac inflammation appeared to have existed, but, for about a fortnight preceding her admission, she presented choreal action, gradually increasing in degree and affecting the extremities and face.

During the days immediately succeeding her admission, a rapid change occurred in the degree of the choreal movements, and in the state of the heart's action. The latter became so disturbed, feeble, and excited, with feeble arterial pulse, as to cause serious anxiety for the safety of the patient, and at the same time the choreic agitation increased with such violent restlessness and rolling in bed that excoriation occurred over the sacrum and both nates, while contortion of the features and tossing of the extremities, especially when their movement was attempted, continued excessive. The articular effects of rheumatism decreased, temperature became more natural, and urine healthy, but the bowels became torpid. The arsenic was persevered with, and a few 30-grain doses of bromide of potassium were given. Each dose was followed by a short period of quiescence, but, on the 20th, the excitement of the heart's action became so alarming that 25-minim doses of tincture of Indian hemp were administered, followed by apparently marked, but only transient abatement of the spasmodic movement, which, as Dr Hogg, the resident physician, reported, seemed to recur subsequently with increased and distressing severity.

On the following day—that is, the sixth of her residence in the hospital—her condition seemed desperate, chiefly on account of the protracted and uncontrollable hurry of the heart's action. She was ordered to have *six minims* of the tinct. cannabis every hour, the arsenic and other remedies being intermitted. The bowels were now well regulated, the excoriations of the back and nates had increased so as to form superficial sloughs of considerable extent, the pulse was small and so rapid as not to be counted, and the heart's action was still feeble, rapid, and disturbed. She had four ounces of brandy per day. On the following day, having had twenty doses of the tincture, there was marked and increasing improvement. The violence of the tossing and rolling had diminished materially, though still it was necessary to have her secured in bed to prevent her falling or rolling over. From this time till the 15th day of her residence in the hospital, the tincture was administered from hour to hour, and she continued to make daily and progressive improvement. At that date (the 28th) she had been free of all the more violent spasmodic movements for two days; the heart's action was quiet, pulse about 80, appetite good, bowels regular. She still presented a degree of the peculiar grimace, with awkwardness in protruding the tongue and in movement of the arms and hands. There was great mental lethargy, with languor and exhaustion, which made it impossible for her to be out of bed.

The tincture of hemp was now discontinued, and arsenical solution in four-minim doses resumed.

The subsequent progress of the case, though tedious, and so far disappointing, may be told in a few sentences. On the 1st of November, and on several occasions during the rest of that month, there occurred a renewal of the choreal state, which had not indeed absolutely disappeared, though it was often so trivial and even absent as to encourage the hope of an early recovery. Arsenic was perseveringly employed, with a carefully-regulated diet and general management, but on each occasion, of which three were noted, when an exacerbation of the choreic condition arose, a marked abatement of the muscular action resulted from the administration of small and hourly-repeated doses of tincture of hemp, relief sometimes arising so speedily as within six or eight hours. On one occasion the improvement was not decided for three or four days.

In the beginning of December, rheumatic symptoms recurred with slight febrile action and articular pains and renewal of choreic agitation. At the same time, marked excitement of the heart's action was renewed, and now, for the first time, a faint soft diastolic murmur, indicative of aortic regurgitation, was with difficulty perceived. A weak solution of acetate and nitrate of potash was administered, and grain doses of opium four or five times in twenty-four hours. Pain and fever abated, but not the spasmodic movement, and on the third day afterwards six-minim doses of tincture of hemp were given every two hours, followed by an immediate decrease of the chorea, which at once declined to its slightest degree in two or three days.

The patient now presented more marked indications of returning health. The state of mental lethargy into which she had early lapsed was now passing off; her appetite was revived, and on the 20th December she was able to be out of bed and to walk with assistance. Small doses of the iodide of potassium with the infusion of quassia were given, and improvement went on uninterruptedly; she did not, however, cast off the choreic jerk and awkwardness till the second week of January 1869. She has since had a very comfortable convalescence, but the diastolic murmur noted above continues strongly developed.

In the remarks I have to offer on this case, I confine myself to the points which illustrate the value and application of *cannabis Indica* in the treatment of choreal spasm. It is well said by Dr Hughes, that "each case of chorea, like each case of every other disease, should be separately studied; and though it may be regarded as one of a class, should still be viewed as a distinct individual of the class." In the case of my patient, the general characteristics of the attack point it out as an example of a large class of cases in which acute rheumatism constitutes the primary and ori-

ginating source of chorea, while its special features simply declare the degree of chorea, with its repeated recurrences, and the unusual violence of agitation, to have been more than ordinarily severe, without any such personal or inherited constitutional peculiarity as exists in certain forms of this and of other nervous diseases. Connected with the severity of the chorea, an inquiry of some difficulty arises out of the condition of the heart, particularly its disturbed action in the early stage, and the endocarditic lesion which occurred later, and which declared its presence only with the renewed rheumatic attack in the beginning of December. At the time of her admission and subsequently, notwithstanding the extraordinary hurry of the heart's action, I persuaded myself that there was no organic nor inflammatory lesion, and I came to the conclusion that the severity of the choreic state had extended to the heart. The evidences of endocarditis subsequently developed cast doubt on my view of the previously choreic state of the heart; and there does not appear to be any means of solving the question beyond the opinion of those who saw the patient. It certainly seems unlikely that endocarditis capable of causing such extreme disturbance of the heart's action should have existed, unaccompanied from the outset by other indications of its presence.

This point possesses some interest in connexion with the view advanced by Dr Russell Reynolds, that "Indian hemp has been of no service in those affections of mind, sensation, or motility, which are simply functional in their character, or, at all events, have no established morbid anatomy. On the other hand, that it has afforded notable relief in cases where organic disease existed." I do not agree with this view, but it would be beside my object to discuss it here. On the supposition, however, that the view is a sound one, it suggests that, in my patient, the organic lesion had originated in the heart at an early stage of the attack, and, consequently, the beneficial effects of the cannabis were so readily exerted. On the whole, the conclusion is a fair one, that endocarditis was present earlier than appeared; though still, I cling to the view that the disturbed action was, in the first instance, functional and choreic.

The practical interest of my case, however, consists in the illustration it affords of the special use and application of cannabis in the treatment of choréal spasm, and of the mode in which the remedy may be administered in many cases, if not in all. I have already remarked on the mistake, as it seems to me, of looking for general curative results in this or in any disease from the mere general application of special therapeutic observation or experience. I think the cases and cures of chorea by tincture of hemp, reported by Sir Dominic Corrigan, to which I have referred, illustrate the fallacy of such reasonings; but, on the other hand, the case of my patient suggests that there is a special, and perhaps a frequently

useful, application of the drug in such circumstances. The impression which the case leaves on my mind is, that cannabis has a peculiar value and power in controlling the irregular movements of chorea, which ever and again are terribly distressing, and possibly even dangerous, to the patient; and it would be of no small moment to determine the extent and limit of its influence, and to ascertain whether or not choreic action, even in slighter cases, might not be moderated by this remedy.

The result of repeated trial in my patient seems to show, on the one hand, that the violence of choreal action was speedily moderated; and the protracted duration of the case, on the other hand, makes it sufficiently evident that the virtue of the remedy did not reach farther in the direction of removal and radical cure of the disease. This points to an important question in the treatment of chorea, which has been mooted by many writers on the subject, viz., how far the chorea is to be dealt with as an independent condition, and how far its treatment and removal will be best achieved by the treatment of the diseased state out of which it has sprung? I think that systematic writers and clinical lecturers have dealt with the subject of chorea too much as an independent disease, and that the late Dr Babington, of London, in his justly-admired paper on chorea, indicated a sound and philosophic principle, when he advised that "when the disease has arisen by metastasis of rheumatism, it should be treated in the same way as pericarditis is treated."

Recognising, then, the principle that our chief aim in the treatment is to combat the constitutional state, or the local disease in connexion with which the chorea has arisen, I conclude farther, from the case I have read, that an important aim must sometimes, if not at all times, be to allay the severity of the choreal state by the use of cannabis, or by other means. On this point, I cannot resist quoting from M. Trousseau his earnest utterances in the behalf of tartar emetic as a means of subduing the violence of choreal agitation:—"Unfortunately," says that learned physician, "there are cases in which the convulsive agitation is of such violence that all known means are without avail, and the physician too often sees poor young girls perish miserably—the skin rubbed and deeply ulcerated by incessant friction, that no appliance can obviate." But surely, in such circumstances, cannabis Indica is a far more appropriate remedy than tartar emetic, "affording," as M. Trousseau adds, "though only in exceptional cases, a chance of success where we appeared impotent." The limit of the therapeutic action of cannabis Indica in these cases is incidentally indicated, with a thoroughly practical wisdom, by Dr Williams and by Dr Walshe. So long ago as in 1843, Dr Williams is reported to have said, in the course of a discussion, that "he had found it relieve chorea during its exhibition, but without radical effect on the disease." In 1849, Dr Walshe, in a clinical lecture, says:—"Not only was

its sedative effect marked in degree, but it was almost immediate in point of time, leaving no doubt on my mind as to the reality of its influence."

The recurrent attacks of chorea in the case of my patient afforded the means of direct illustration of the efficacy of the drug in subduing the choreal state; for repeatedly the same result was witnessed in the speedy and more or less complete subsidence of the agitation under the use of the remedy, and the decided effect produced on the heart's action tends to confirm me in the impression that the disturbed state of that organ was largely choreal.

As to the mode of administering the remedy, small and frequent doses proved both safe and effective, and great advantage appeared to arise from increasing the frequency of the dose rather than its amount. Believing, as I do, that *cannabis Indica* is a remedial agent of value in many and various maladies, I am prepared to recommend this mode of seeking its effects by frequent rather than by larger doses at longer intervals. Such a mode of prescribing it has not been usual; but I find, quoted from an American source, the account of a case of hiccup treated in this way by eight-drop doses of a fluid extract, administered hour by hour, in which recovery from an attack that had defied treatment for five days took place in a few hours.

I have brought this case under the notice of the Medico-Chirurgical Society, not on account of any novelty in its history, nor on account of any conclusions it very positively points to, but simply to bring anew to the light of day an important therapeutic fact, which seemed like to be buried in the pages of undisturbed magazines, and which, probably, has an important application, not only to distressing and dangerous cases of chorea, but even to slight and ordinary cases, as well as to cases of other spasmodic diseases, such as *hiccup*, *irritable heart*, *asthma*, *tetanus*, and the like.

